

CLAIMS

What is claimed is:

Sub B1
5 1. An optical fiber splicer comprising:
a pair of retaining means for retaining optical fibers to be spliced;
abutment and pressure-contact means for sliding terminal portions
of the optical fibers in mutually opposite directions along a groove of V-shaped
cross-section, producing substantially equal elastic forces in the terminal
portions, bringing the terminal portions into abutment, and bringing the abutted
terminal portions into pressure contact.

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2. An optical fiber splicer according to claim 1, wherein the
abutment and pressure-contact means is a drive mechanism for moving a block
formed with the groove of V-shaped cross-section.

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3. An optical fiber splicer according to claim 1, wherein the
abutment and pressure-contact means is a rotating mechanism for rotating the
pair of retaining means.

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4. An optical fiber splicer according to any of claims 1 to 3,
further comprising a pressure limiting mechanism for limiting pressure applied
by the abutment and pressure contact means to a prescribed value.

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5. An optical fiber splicing method comprising:
a step of sliding terminal portions of optical fibers to be spliced
along a groove of V-shaped cross-section in mutually opposite directions and
producing substantially equal elastic forces in the terminal portions; and
a step of bringing the terminal portions into abutment and then
bringing the abutted terminal portions into pressure contact.

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6. An optical fiber splice structure comprising terminal portions of
optical fibers spliced in a groove of V-shaped cross-section under pressure
contact and exertion of substantially equal elastic forces.